THE PHYTOLOGIST.

No. XIX. | DECEMBER, MDCCCXLII. | PRICE 1s.

ART. XCIX. — *Notes on Botanical Excursions from Glasgow during the past Summer.* By J. H. BALFOUR, M.D., Regius Professor of Botany in the University of Glasgow.

DURING last summer I made botanical excursions every week with my pupils, and the results of some of these will, I hope, not be uninteresting to the readers of 'The Phytologist.'

My first trip was to Bowling, a small village on the banks of the Clyde, about ten miles west of Glasgow. The vegetation of the trap rocks in the neighbourhood is very luxuriant, but no plants of particular interest were gathered, except Glyphomitrion Daviesii. Our visit to Campsie Glen was more productive. Here my pupil Mr. Macleod picked Equisetum Drummondii,— the first time it had been seen in the neighbourhood of Glasgow. I have no doubt that this plant is abundant in many woods, and has often been mistaken for E. arvense. I picked it in profusion afterwards near the Falls of Clyde. Among other plants met with in or near the Glen I may notice Geum intermedium, a plant which is common in all the woods in this neighbourhood, Viola lutea, Campanula latifolia, Geranium lucidum, Cardamine amara, Stellaria nemorum, Lysimachia thyrsiflora, Polypodium Phegopteris, Vaccinium Oxycoccos and Buxbaumia aphylla. Carex pauciflora was also seen in marshy ground near Strathblane, at a much lower level than usual.

The wooded banks of the Clyde at Hamilton and Cadzow furnish an ample supply of plants for the student of Botany. Here we found Carex pendula, sylvatica and pallescens, Cardamine amara and Stellaria nemorum in great luxuriance. Veronica montana, Epipactis latifolia, Arum maculatum, Doronicum Pardalianches, Trollius europæus, Ornithogalum umbellatum, Euonymus europæus, Viburnum Opulus, Ribes alpinum, Ophioglossum vulgatum and Scolopendrium vulgare. Near Bothwell Castle and Blantyre Priory we saw Carex remota, Aquilegia vulgaris, Berberis vulgaris, Galium boreale, Geranium phæum and Allium vineale. On the banks of the Clyde some alpine plants occur at an elevation considerably below that at which they usually grow. Thus, near the Falls of Corra Lin there is considerable profusion of Saxifraga oppositifolia and Asplenium viride,—alpine plants, which, however, are not found on the mountains in the vicinity.

The facilities afforded by railway and steam enabled us to visit many interesting localities at a considerable distance from Glasgow. One of these was the island of Bute, famous for the mildness of its climate. We proceeded along the shore from Rothesay towards Mount-Stuart, and returned by a road across the island. In the course of our walk we gathered Cotyledon Umbilicus in great abundance, Anagallis tenella, Saxifraga aizoides, Pinguicula lusitanica, Alisma ranunculoides, Sinapis monensis, Veronica scutellata, Anthyllis Vulneraria, Alsine peploides, Scirpus pauciflorus, Carex paniculata, Poa maritima, Osmunda regalis and Scolopendrium vulgare.

Our next excursion was made in the neighbourhood of Ratho, a village about ten miles west from Edinburgh. We examined chiefly Ravelrig Bog and Dalmahoy Hills. In the woods at Dalmahoy we picked Cephalanthera ensifolia, Pyrola minor and Listera ovata; and on Dalmahoy Hill, Saxifraga hypnoides, Viola lutea, Trientalis europæa and Epilobium angustifolium. In Ravelrig Bog and the woods near it, we saw Corallorhiza innata, Listera cordata, Potamogeton oblongus and Linnæa borealis. Before returning to Glasgow we paid a visit to Linlithgow, and in the loch near the palace we found profusion of Ceratophyllum submersum? Potamogeton crispus and pusillus, Nasturtium terrestre and Poa aquatica.

The kindness of my friend John Smith Esq. LL.D., enabled us on another occasion to visit the romantic glens in the neighbourhood of his residence at Crutherland, about eleven miles south-east from Glasgow. On the wooded banks we met with Carex stricta in considerable quantity, Carex sylvatica and remota, Epilobium angustifolium, Milium effusum, Impatiens Noli-me-tangere, Cistopteris fragilis, Polypodium Dryopteris and Phegopteris. On the moors in the neighbourhood grow Drosera anglica, Vaccinium Oxycoccos, Veronica scutellata, Callitriche platycarpa, Rhynchospora alba, Lycopodium Selago and Splachnum mnioides. Near Langlands I gathered Peucedanum Ostruthium* and Lamium maculatum, var. β. *lævigatum.*

The Island of Arran is interesting in a botanical as well as a geological point of view, and the facilities afforded by the Ayr railway and the steam-boats from Ardrossan, induced me to visit it. The party spent two days on the island, making Brodick their head-quarters. Our first walk extended from Brodick, along the shore to Lamlash; then to Whiting Bay, Dippin Point and Kildonnan Castle, whence we returned to Brodick. During this walk we gathered many interesting plants, among which may be mentioned Sinapis monensis, Steenhammera maritima (the oyster-plant as it is called), Glaux maritima, Poa maritima, Ammophila arenaria, Juncus maritimus and Gerardi, Scirpus maritimus, Blysmus rufus, Aster Tripolium, Solidago Virgaurea, Plantago maritima and Coronopus, Anagallis tenella and arvensis, Habenaria bifolia and chlorantha, Gymnadenia conopsea, Ranunculus sceleratus, Althæa officinalis, Atriplex rosea, Bromus arvensis, Carex arenaria, extensa and lævigata, Œnanthe crocata and pimpinelloides, Potamogeton oblongus, Erythræa Centaurium (a variety with very narrow leaves, the β. *compressa* of some authors), and Lycopodium selaginoides. Between Lamlash and Whiting Bay there is profusion of Hypericum dubium (Leers) and Androsæmum, Cotyledon Umbilicus, Agrimonia Eupatoria, Eupatorium cannabinum, and Isolepis setacea. Near Dippin Point, where there are fine trap cliffs, we met with Convolvulus sepium, Verbascum Thapsus, Solanum Dulcamara, Conium maculatum, Ligusticum scoticum and Vicia sylvatica.

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* This plant was also picked subsequently near Kilwinning in Ayrshire, by my pupil Mr. James C. Murray.

In our second day's walk we proceeded by the sea-shore towards the northern part of the island. We visited Glen Sannox, ascended Goatfell, and returned by Glen Rosa to Brodick. Along the shore we found many of the species picked on the previous day, and besides these we noticed Drosera anglica, Lycopus europæus, Polygonum lapathifolium, Osmunda regalis, Bidens tripartita, Corydalis claviculata. Near the Inn at Brodick there is profusion of a variety of Mentha rotundifolia, called *velutina* by Mr. Babington; and here also we picked specimens of Pastinaca sativa. In Glen Sannox we searched in vain for Avena planiculmis, which was discovered there several years ago by Mr. Stewart Murray. The ascent of Goatfell from this glen is very steep and difficult, and the granitic debris is very unproductive. Goatfell itself, although attaining an elevation of about 2700 feet, does not yield many alpine plants. This may arise partly from its insular situation, and partly from the nature of the dry granitic rocks of which it is composed. The plants picked by the party were Saxifraga aizoides and stellaris, Salix herbacea, Sedum Rhodiola, Alchimilia alpina, Armeria maritima, var. β. *alpina*, Empetrum nigrum, Juniperus communis, var. β. *nana*, Carex pauciflora and rigida, Agrostis vulgaris, var. *β. pumila*, Festuca ovina, var. *ε. vivipara*, and Lycopodium Selago. On descending into Glen Rosa we picked Drosera anglica, Lythrum Salicaria, Molinia cærulea, var. *β. alpina*, Rhynchospora alba, Galeopsis versicolor, Habenaria bifolia and chlorantha and Vaccinium Vitis-Idæa. On the sea-shore near the inn we also gathered Sagina maritima and Eryngium maritimum.

With the view of examining the Flora of the alpine districts, we made an excursion in July to the mountains on the shores of Loch Lomond. Leaving Glasgow at 4, P.M., we reached Tarbet in the evening. Here we took up our residence for two days, and made excursions in the neighbourhood. On the first day we proceeded along the shores of Loch Lomond, as far as the Sloy water; we then ascended the stream to Loch Sloy, and thence commenced our ascent of Ben Voirlich, a high hill near the head of Loch Lomond. On the shores of the Loch we picked Osmunda regalis and Hymenophyllum Tunbridgense and Wilsoni, Hypericum Androsæmum and Betula alba and glutinosa. In Loch Sloy, Lobelia Dortmanna, Littorella lacustris and Subularia aquatica were seen. On Ben Voirlich the alpine plants collected were Alchimilla alpina, Silene acaulis, Sibbaldia procumbens, Cerastium alpinum, Juncus trifidus and triglumis, Saussurea alpina, Gnaphalium supinum, Hieracium alpinum, Saxifraga aizoides, stellaris, hypnoides and nivalis, Carex rigida, Polystichum Lonchitis, Sedum Rhodiola, Polygonum viviparum, Poa alpina, and a new Poa, called by Dr. Parnell P. Balfouri, Aira alpina and var. *vivipara*, Festuca ovina, var. *ε. vivipara*, Epilobium alpinum and Thalictrum alpinum. Carex saxatilis was gathered in great profusion on the descent of the hill towards the head of Loch Lomond. On the second day Ben Lomond was visited, and on it, besides most of the alpine plants already noticed on Ben Voirlich, we saw Rubus suberectus and Chamæmorus, Scutellaria galericulata, Salix arenaria and Asplenium viride.

On the shores of Loch Lomond we particularly remarked the great quantity of fruit produced this season, by the ordinary trees, as birch, beech, oak, alder, hazel, apple, holly, &c.

J. H. Balfour.

Glasgow, November 11, 1842.

ART. C. — *Additions to the Phænogamic Flora of ten miles round Edinburgh.* By THOMAS EDMONSTON, Esq.

Baltasound, Shetland Islands,
November 1, 1842.

SIR,

In the course of my botanising this season through the peculiarly rich and interesting district within ten miles of Edinburgh, having observed several plants not noted in the last List of the Flora of that district, I beg to hand you the catalogue of them, with habitats &c.; and also notes on a few of the rarer or more interesting species previously observed. If you should consider this trifling contribution to our knowledge of local Botany worthy of insertion in your valuable periodical, it is at your service.

I am, Sir,
Your very obedient Servant,
THOS. EDMONSTON.

To the Editor of 'The Phytologist.'

Bidens cernua, β. radiata. Lochend.

Bromus velutinus. Some dwarf specimens of the variety β. occurred near Musselburgh.

Callitriche platycarpa. Compensation pond on the Pentland hills, Lochend and Duddingston Lochs, &c. Afterwards observed in the former station by Mr. Babington, who assures me it is the true plant. It has not, I think, been previously noticed out of England.

Carex divisa. Pentland hills, scarce.

„ *incurva.* Musselburgh and Dalmeney. I also, late in the season, picked what I believe was this plant near St. David's, on the Fife side of the Firth, but it was too far gone to be identified properly. This species is probably often passed over as C. arenaria.

Cerastium holosteoides. The C. triviale, var. β. *holosteoides,* of the Edinburgh Botanical Society's Catalogue (2nd edit.) seems a distinct plant, as I shall soon endeavour to prove. The Edinburgh specimens agree with some from Kinfauns in Perthshire, exhibited at the Botanical Society last winter. Dalkeith.

Cerastium (tomentosum ?). Hills behind Aberdour.

Dianthus glaucus, Linn. (D. deltoides, β. *glaucus,* Hook.) Left unmarked in the Edinburgh Catalogue, but abundant in the King's Park. I should be disposed to consider it distinct.

Festuca ovina, ε. vivipara. Pentland hills, above Collinton. It appears to me that some confusion exists with regard to the species called F. vivipara by Smith. The plant figured by that author [Eng. Bot. 1355], and abundant on all our more elevated hills, especially those of a micaceous character, seems to be distinct from the common F. ovina of our plains. It is not improbable that the alpine plant is the viviparous state of a distinct grass, which, from the great disposition of alpine grasses to assume the viviparous character, is seldom seen in its normal form, and is therefore sunk into F. ovina. The study of the alpine plant would repay any one conveniently situated for that purpose. I may notice, *en passant*, the curious tendency of alpine grasses, such as Aira alpina, Poa alpina, &c., to become viviparous. It would almost appear an effort of nature to make up for the paucity of seeds matured in such situations.

Pimpinella magna. I am not aware of this having been detected previously in Scotland. It occurs abundantly by the hedge-sides, shortly after leaving the village of Collinton, and proceeding westwards; probably merely a luxuriant variety of P. Saxifraga. The Collinton specimens agree perfectly with those from the Isle of Wight and numerous others in my collection.

Polygonum Raii. This is surely often confounded with the maritime variety of P. aviculare (I presume " P. maritimum, L." of the Edinburgh Catalogue), for the true plant occurs abundantly on both sides of the Firth of Forth. This is surely not the P. Roberti of the continental botanists, of which I possess specimens from the shores of the Adriatic, &c.

Ranunculus fluitans, Lam. Though now raised to the rank of a species, I cannot believe this to be anything more than one of the multifarious varieties of R. aquatilis; the differences merely lie in the very peculiar habit. It is sometimes two or three feet long, but this is occasioned by its growing in deeper water; it has also a curious tufted and sometimes almost geniculated appearance. Lochend.

Rubus nitidus, rhamnifolius, suberectus. Craigmillar Castle. I doubt not that many more of the reputed species of bramble may be found in this neighbourhood, and those fond of multiplying specific distinctions in this troublesome and intricate genus, will have abundant opportunity about the above-named station, the Peebles road, Dalkeith, Craigleith, and numerous other localities near Edinburgh. I will not attempt to name any but the above three, and I must confess, from my mite of experience, that I do think, without the slightest danger of confounding distinct plants, the arrangement of Koch might be followed in distinguishing nearly all our British species.

Salvia Sclarea. Armiston and Dalkeith; in all probability the outcast of a garden.

Sambucus nigra, β. *laciniata*. Collinton, Auchindenny and Dalhousie woods.

Saxifraga platypetala. Abundant at Habbie's How, Pentland hills. Whether this is only one of the forms of S. hypnoides, or a distinct species, seems still doubtful. The flowers are as large as, and have quite the appearance of, those of S. granulata, and the habit is more lax and elongated than in the common form.

Viola lactea. Arthur's Seat. A variety of V. canina, as I have proved by seeing every intermediate stage.

SPECIES PREVIOUSLY OBSERVED IN THE DISTRICT.

Adonis autumnalis. Fields near Comely bank; probably introduced.

Alopecurus agrestis. Preston pans. Beautiful specimens and very abundant in this station.

Arctium Bardana. This is again restored to the rank of a species, but I am unable to see permanent characters, and I must confess it seems to run into A. Lappa. What I believe to be an intermediate state, is the most common burdock about Edinburgh.

Bromus madritensis. Grange toll.

Barbarea præcox. Roslin, Currie, &c., not uncommon. The small flowers and large radical leaves of this plant are very constant in all the specimens I have seen.

Cardamine sylvatica. Very abundant, but appearing to run into C. hirsuta. In habit it combines the herbage of C. amara with the flowers of C. hirsuta, and is apparently a luxuriant variety of the latter.

Carex axillaris. Said to be found near Craigmillar Castle, but I have been unable to detect it there, and specimens I have seen under this name from that station, were varieties of C. remota.

Carex vesicaria. Duddingston Loch.

Cichorium Intybus. A rare Scottish plant, but very abundant and certainly indigenous near Granton, on the green slope on both sides of the road between the pier and Wardie.

Cochlearia danica. Abundant on both sides of the Firth.

Doronicum Pardalianches. Dalkeith, Hunter's tryste, &c. D. plantagineum is said to occur, but I cannot detect permanent characters.

Eranthis hyemalis. Craigmillar Castle.

THOS. EDMONSTON.

(To be continued).

Art. CI.—*A Flora of the Neighbourhood of Saffron Walden, Essex.*

By G. S. Gibson, Esq.

Clematis Vitalba. Common in hedges.

Thalictrum minus. Near Linton; rare.

Anemone nemorosa. Woods and thickets, abundant.

——— *Pulsatilla.* Bartlow Hills and Hildersham.

Adonis autumnalis. Corn-fields, but rarely

Ranunculus aquatilis. Ponds and ditches, plentifully.

——— *Lingua.* At Sawston; rare.

——— *Flammula.* Marshy places, common.

——— *Ficaria.* A common weed.

——— *auricomus.* Woods &c., not uncommon.

——— *sceleratus.* Watery places, occasionally.

——— *acris, repens,* and *bulbosus.* Very common weeds.

——— *arvensis.* Corn-fields.

Helleborus fœtidus. Woods, rather unc.

Caltha palustris. Ditches &c., frequent.

Delphinium Consolida. Corn-fields, occasionally.

Berberis vulgaris. Common in hedges, though often eradicated by farmers, who imagine that it causes blight on wheat around.

Nymphæa alba. River at Audley End; perhaps planted.

Nuphar lutea. River &c. in several places

Papaver Argemone. Fields & hedge-banks occasionally.

——— *hybridum.* Once found in a field near the town.

——— *dubium.* Waste ground, frequent

——— *Rhœas.* A troublesome weed.

Chelidonium majus. Waste ground near the town, rather rare.

Fumaria officinalis. Fields and gardens, abundant.

——— *parviflora.* Cultivated fields at Littlebury.

Corydalis solida. In the Park, scarcely wild

Cheiranthus Cheiri. Park-walls, &c.

Nasturtium officinale. Ditches &c. abndt.

Barbarea vulgaris. Moist meadows, freqt.

Cardamine pratensis. Marshy ground, co.

——— *hirsuta.* A weed in gardens, &c. but local.

Draba verna. Walls, plentiful.

Thlaspi arvense. A weed in fields and gardens, though very local.

Sisymbrium officinale. Road-sides &c.fr.

——— *Sophia.* Waste ground, rare

Erysimum cheiranthoides. Walls and cultivated ground.

——— *Alliaria.* Hedges, frequent.

Camelina sativa. Cultivated fields, rare.

Coronopus Ruellii. Waste ground, not common

Capsella Bursa-pastoris. Abundant.

Brassica Napus. Waste ground, frequent

——— *Rapa.* Road-sides, occasionally.

Sinapis alba. Cultivated ground.

——— *arvensis & nigra.* Common weeds

Raphanus Raphanistrum. Ditto.

Reseda Luteola. Dry banks, not uncomn.

——— *lutea.* Chalky fields in several pl.

Helianthemum vulgare. Open banks, freq.

Viola hirta. Shady hedges, frequent.

——— *odorata* and *canina.* Abundant.

——— *tricolor.* A common weed.

Polygala vulgaris. Dry banks, not uncom.

Dianthus Armeria. Twice found in a field

——— *deltoides.* Hildersham, rare.

Saponaria officinalis. Moist meadows nr. Ickleton.

Silene inflata. Very common.

——— *noctiflora.* Corn-fields &c. occas.

——— *Armeria.* Waste ground, rare, the outcast of gardens.

Lychnis dioica (vespertina). Very common

——— —— *(diurna).* Far less common

——— *Flos-cuculi.* Moist shady places

Agrostemma Githago. Corn-fields, freqnt.

Sagina procumbens and *apetala.* Walls & dry ground, plentiful.

Spergula arvensis. Fields occasionally.
—— *nodosa.* Meadows at Ickleton.
Stellaria media. Abundant everywhere.
—— *holostea.* Hedges, common.
—— *graminea.* At Linton.
Arenaria trinervis. Woods & shady hedges
—— *serpyllifolia.* Walls &c. common
—— *tenuifolia.* Walls at Audley End, rare.
Cerastium vulgatum. Not uncommon.
—— *viscosum* and *semidecandrum.* Fields and dry ground, common.
—— *arvense.* Dry chalky banks; Bartlow Hills, &c.
—— *aquaticum.* Sawston.
Linum usitatissimum. Cultivated fields, occasionally.
—— *catharticum.* Dry banks, common
Malva sylvestris and *rotundifolia.* Fields and roadsides, common.
—— *moschata.* Hedges in various places
Tilia europæa. Hedges &c. probably pl.
Hypericum Androsæmum. Near Newport, rare.
—— *perforatum.* Abundant.
—— *quadrangulum.* Watery places frequent.
—— *hirsutum.* Chalky banks, freq.
Parnassia palustris. Marshy meadows at Ashdon and Chesterford, rather rare
Acer campestre. Common in hedges.
—— *Pseudo-platanus.* Hedges, scarcely wild.
Geranium sanguineum. Thickets near Newport, rare.
—— *pratense.* Shortgrove Park, rare
—— *lucidum.* Old walls occasionally
—— *robertianum.* Hedges, common
—— *molle* and *dissectum.* Abundant
—— *pusillum.* Not uncommon.
Erodium cicutarium. Banks occasionally
Oxalis Acetosella. Woods, not very com.
Euonymus europæus. Hedges and groves
Rhamnus catharticus. Not rare in hedges
Ulex europæus. Barren ground, not very abundant.
—— *nanus.* Triplow, rather rare.
Genista tinctoria. Banks in several places
Cytisus Scoparius. Near Newport, not common.
Ononis arvensis. Borders of fields, plentif.
Anthyllis Vulneraria. Chalky banks, co.
Medicago lupulina. Abundant.
—— *sativa.* Cultivated ground, not wild.
Melilotus officinalis. Fields and hedges, sparingly.
Trifolium repens and *pratense.* Very com.
—— *ochroleucum.* Fields & hedges, not rare.
—— *medium.* Moist meadows in several places.
—— *scabrum.* Dry banks at Hildersham.
—— *fragiferum.* Road-sides and moist meadows.
—— *procumbens* and *minus.* Dry pastures &c. common.
—— *filiforme.* Near Hildersham &c.
Lotus corniculatus. Very common.
—— *major.* Watery places, not rare.
Astragalus glycyphyllos. Borders of fields rather sparingly.
Hippocrepis comosa. Dry chalky banks.
Onobrychis sativa. Cultivated fields and banks, frequent.
Vicia Cracca, sativa and *sepium.* Fields and hedges, common.
Ervum hirsutum & *tetraspermum.* Woods and shady hedges.
Lathyrus Aphaca. Borders of fields in several places.
—— *Nissolia.* Woods &c. but rare.
—— *pratensis.* Common.
—— *sylvestris.* Woods and hedges in several places.
—— *latifolius.* Woods &c. scarcely wild.
Prunus domestica. Hedges occasionally.
—— *insititia.* Not uncommon.
—— *spinosa.* Abundant.
—— *Cerasus.* Woods and hedges near Quendon, &c.
—— *Padus.* Woods, rare.
Spiræa Filipendula. Bartlow Hills, Newport, &c.

Spiræa Ulmaria. Watery places, com.

Geum urbanum. Freqnt. in shady hedges

Rubus rhamnifolius. Rare about Walden

—— *fruticosus* and *cæsius.* Very freqnt

—— *corylifolius.* Widdington, &c.

Fragaria vesca. Shady hedges and woods

Potentilla anserina and *reptans.* Very co.

—— *argentea.* Near Hildersham.

—— *Fragariastrum.* Woods &c. fre.

Tormentilla officinalis. Not very common

Agrimonia Eupatoria. Borders of flds. fre.

Alchimilla vulgaris. Waste grnd. very ra.

—— *arvensis.* Dry fields, common

Poterium Sanguisorba. Pastures and banks, frequent.

Rosa tomentosa. Woods and hedges in several places.

—— *rubiginosa.* Near Chesterford &c., not rare.

—— *canina, sarmentacea* and *arvensis.* Common in hedges.

Cratægus Oxyacantha. Abundant.

Pyrus communis. Woods and hedges, rather rare.

—— *Malus.* Not uncommon.

—— *aucuparia.* Woods at Debden, ra.

Epilobium angustifolium. Shortgrove Park, not common.

—— *hirsutum* and *parviflorum.* Ditches &c. very common.

—— *montanum.* Waste ground & walls, plentiful.

—— *tetragonum.* Watery places, occasionally.

Œnothera biennis. Waste ground, rare and not wild.

Circæa Lutetiana. Gardens and shady pl.

Hippuris vulgaris. River at Audley End.

Myriophyllum spicatum. Ponds, not co.

Callitriche verna. Very common.

—— *autumnalis.* In the Park &c. not rare.

Lythrum Salicaria. Ditches, frequent.

Bryonia dioica. A common weed.

Scleranthus annuus. Dry fields at Linton, sparingly.

Sempervivum tectorum. On many roofs and walls.

Sedum Telephium. Hedge-banks, rather uncommon.

—— *dasyphyllum.* On garden walls, scarcely wild.

—— *album.* Roofs, but rare.

—— *acre.* Dry banks at Linton.

—— *reflexum.* Roofs, but rare.

Ribes rubrum and *Grossularia.* Hedges occasionally.

Saxifraga granulata. At Hildersham &c.

—— *tridactylites.* Walls &c. not uncommon.

Hydrocotyle vulgaris. About Linton.

Sanicula europæa. Woods and thickets.

Conium maculatum. Road-sides, common.

Petroselinum segetum. Fields and hedge-banks, very rare.

Helosciadium nodiflorum. Common.

Sison Amomum. Borders of fields, freqt.

Ægopodium Podagraria. A troublesome weed.

Pimpinella Saxifraga. Dry pastures, ab.

—— *magna.* Shady places at Little Walden.

Sium angustifolium. Ditches, not very co.

Bupleurum rotundifolium. Corn-fields at Linton &c. sparingly.

Œnanthe fistulosa and *Phellandrium.* River at Littlebury.

Æthusa Cynapium. A common weed.

Silaus pratensis. Borders of fields, not unc.

Angelica sylvestris. Moist woods, freqnt.

Pastinaca sativa. A troublesome weed.

Heracleum Sphondylium, Daucus Carota, and *Torilis Anthriscus.* Common.

Torilis infesta. Corn-fields and road-sides, not uncommon.

—— *nodosa.* Hedge-banks, frequent.

Scandix Pecten and *Anthriscus sylvestris.* Abundant.

Chærophyllum temulentum. Fields, freqnt.

Adoxa Moschatellina. Woods, rare; Peverell's &c.

Hedera Helix. Plentiful.

Cornus sanguinea. Hedges &c. common.

Viscum album. Orchards at Debden.

Sambucus Ebulus. Moist meadows at Wenden, Bartlow, &c.

Sambucus nigra. Abundant.
Viburnum Opulus. Not rare.
——— *Lantana*. Hedges, frequent.
Lonicera Periclymenum. Very common.
——— *Xylosteum*. At Littlebury; but doubtful if wild.
Galium verum and *Mollugo*. Common.
——— *cruciatum*. Littlebury.
——— *palustre*. Watery places, very fr.
——— *saxatile*. At Audley End.
——— *tricorne*. Corn-fields at Linton and Widdington.
——— *Aparine*. Very abundant.
Sherardia arvensis. Fields, frequent.
Asperula odorata. Woods in several places
——— *cynanchica*. Dry chalky banks, plentiful.
Valeriana dioica. Marshy pl. occasionally
——— *officinalis*. Frequent.
Fedia olitoria. Corn-fields.
—— *dentata*. At Bartlow and Linton.
Dipsacus sylvestris. Road-sides, common.
——— *pilosus*. Clavering &c. but rare
Scabiosa succisa. Pastures in various parts
——— *columbaria*. Dry banks, common
Knautia arvensis. Plentiful.
Tragopogon pratensis. Pastures &c. freqt.
Helminthia echioides. Borders of fields, not rare.
Picris hieracioides. Road-sides, Little Walden, &c.
Apargia hispida, *A. autumnalis*, *Hypochœris radicata* & *Crepis virens*. Very com.
Sonchus arvensis. Frequent in fields &c.
——— *oleraceus* and *Leontodon Taraxacum*. Everywhere.
Hieracium Pilosella. Com. in dry pastures
Lapsana communis. A common weed.
Cichorium Intybus. Road-sides frequent
Arctium Lappa and *Bardana*. Woods and hedges, common.
Serratula tinctoria. Borders of woods, ra.
Carduus nutans and *acanthoides*. Hedges
——— *marianus*. Hedges occasionally; Widdington, &c.
Cnicus lanceolatus and *arvensis*. Abundant
—— *palustris*. Moist meadows, frequent, and in woods.
Cnicus eriophorus. Banks &c. in several places about Walden.
—— *pratensis*. In pastures, rare.
—— *acaulis*. Dry banks and pastures, common.
Onopordum Acanthium. Road-sides, not r.
Carlina vulgaris. Dry banks, not common
Bidens tripartita. Ponds, but rare.
—— *cernua*. Pond at Ashdon.
Eupatorium cannabinum. Moist woods fr.
Tanacetum vulgare. In the Park, rather r.
Artemisia Absinthium. Road-sides, sparingly.
——— *vulgaris*. Very common.
Gnaphalium sylvaticum. Wood at Widdington, rare.
——— *uliginosum*. Moist rd-sds. &c.
——— *germanicum*. Dry pastures, frequent.
Petasites vulgaris. Mead. at Audley End.
Tussilago Farfara. Very common.
Erigeron acris. Near Littlebury, rare.
Senecio vulgaris & *Jacobœa*. Very abndnt.
——— *sylvaticus*. Near Hildersham, ra.
——— *aquaticus*. Ditches, common.
Inula Conyza. Woods, not frequent.
Pulicaria dysenterica. Common.
Doronicum Pardalianches. At Widdington, very rare.
Bellis perennis. Everywhere abundant.
Chrysanthemum Leucanthemum. Common
——— *segetum*. Fields &c., rather rare.
Pyrethrum Parthenium. Waste gr. occas.
——— *inodorum*, *Anthemis Cotula* & *Achillæa Millefolium*. Common.
Centaurea nigra. Abundant.
——— *Scabiosa*. Hedges, frequent.
——— *Cyanus*. Corn-flds. not uncom.
Campanula rotundifolia. Dry banks, co.
——— *Trachelium*. Hedges at Wicken, rare.
——— *glomerata*. Open chalky pastures, frequent.
——— *hybrida*. Corn-flds. not uncom.
Calluna vulgaris. Ickleton Grange, rare.
Monotropa Hypopitys. Plantation near Debden.

Ilex Aquifolium. Hedges at Newport and Quendon.

Ligustrum vulgare. Hedges in several pl.

Fraxinus excelsior. Common.

Vinca minor. Hedge-banks in several pl.

—— *major*. Shady banks, but rare.

Erythræa Centaurium. Pastures &c. occasionally.

Gentiana Amarella. Dry banks, rare.

Chlora perfoliata. Banks and ditches occasionally, not common.

Menyanthes trifoliata. Moist meadows at Ickleton.

Convolvulus arvensis. Very common.

—— *sepium*. Gardens and moist hedges, frequent.

Cuscuta europæa. Rare.

—— *Epithymum* ?* On clover, but rare

Echium vulgare. Dry pastures &c. not pl.

Lithospermum officinale. Plantations at Debden.

—— *arvense*. Waste gr. occas.

Symphytum officinale. Watery places, fr.

Borago officinalis. Waste gr. occasionally

Lycopsis arvensis. Sandy ground about Linton.

Myosotis palustris. Common.

—— *cæspitosa*. Audley End &c. not r.

—— *arvensis*. Abundant.

Cynoglossum officinale. Road-sides, not very common.

Datura Stramonium. Waste gr. very rare.

Hyoscyamus niger. Road-sides and banks occasionally.

Solanum Dulcamara. Hedges and thickets, frequent.

—— *nigrum*. Gardens and rich waste ground.

Orobanche elatior. Hedge banks, not rare.

—— *minor*. Clover-fields, rare.

Veronica serpyllifolia, *Chamædrys*, *hederifolia*, *agrestis*, and *arvensis*. Waste ground, fields, &c. abundant

—— *Anagallis* and *Beccabunga*. Frequent in watery places.

Veronica officinalis. Wood at Widdington, rare.

Bartsia Odontites. Corn-fields &c. frequt.

Euphrasia officinalis. Dry banks.

Rhinanthus Crista-galli. Moist meadows

Melampyrum cristatum. Common in many groves and shady hedges.

Pedicularis palustris. Meadows at Chesterford.

Antirrhinum majus. Garden-walls, naturalized.

Linaria Cymbalaria. Old walls &c.

—— *spuria*. Corn-fields, not uncomn.

—— *Elatine*. Less common than the preceding.

—— *vulgaris*. Common.

—— *minor*. Fields and waste ground sparingly.

Scrophularia nodosa. Woods and hedges, not uncommon.

—— *aquatica*. Ditches, common.

—— *vernalis*. Hedges at Hempsted.

Digitalis purpurea. Near Quendon, but very rare.

Verbascum Thapsus and *nigrum*. Banks and fields, frequent.

Lycopus europæus. Ditches & ponds, occ.

Salvia Verbenaca. Dry banks not uncom.

Mentha sylvestris. Watery places in the Park &c. rare.

—— *viridis*. At Wenden.

—— *gracilis*. Audley End, rare.

—— *hirsuta*. Ditches, common.

Thymus Serpyllum. Dry banks, common

Teucrium Scorodonia. Woods at Quendon, rare.

Origanum vulgare. Common.

Ajuga reptans. Woods, frequent.

Ballota nigra. Very common.

Galeobdolon luteum. Borders of woods, but scarce.

Galeopsis Ladanum and *Tetrahit*. Corn-fields &c. not uncommon.

Lamium album & *purpureum*. Very com.

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* The specimens sent by Mr. Gibson have the calyx nearly as long as the corolla, and the scales in the throat of the latter appear to be more deeply cut than those in C. Epithymum, but in dried specimens they cannot be satisfactorily examined.—*Ed.*

Lamium amplexicaule. Waste gr. occas.
—— *incisum*. Rare in waste ground.
Betonica officinalis. Woods in several pl.
Stachys sylvatica. Shady hedges, common
—— *palustris*. At Chesterford, &c.
—— *arvensis*. Corn-fields, not common
Nepeta Cataria. Road-sides in various prts.
Glechoma hederacea. Abundant.
Acinos vulgaris. Cultivated fields, occas.
Calamintha officinalis. Rare; near Chesterford.
—— *Nepeta*. Chalky banks freqt.
Clinopodium vulgare. Borders of fields, common.
Prunella vulgaris. Pastures, common.
Scutellaria galericulata. Ditches in the Park, &c.
Verbena officinalis. Hedge-banks and near houses, frequent.
Anagallis arvensis. Abundant.
—— *tenella*. At Sawston, not comn.
Lysimachia Nummularia. Moist sha. pl.
Hottonia palustris. At Sawston, rare.
Primula vulgaris. Woods, abundant.
—— *elatior*. Not rare in woods.
—— *veris*. Pastures, very abundant.
Plantago major. Borders of fields, comn.
—— *media*. Too abundant.
—— *lanceolata*. Very common.
Amaranthus Blitum. Once found on a dunghill.
Chenopodium Bonus-Henricus. Road-sides &c. common.
—— *rubrum*? and *murale*. Cultivated ground, but rare.
—— *album*. Very common.
—— *ficifolium*. Cultivated and waste ground.
Atriplex patula and *angustifolia*. Fields &c. not uncommon.
Polygonum Bistorta. Meadows near Quendon, rare.
—— *aviculare*. Very common.
—— *Fagopyrum*. Cultivated fields, not wild.
—— *Convolvulus*. Corn-fields &c. frequent.
—— *amphibium*. Ponds, not unc.
Polygonum Persicaria and *lapathifolium*. Waste ground and moist road-sides, common.
—— *Hydropiper*. On mud-heaps.
Rumex Hydrolapathum. River-side at Ickleton.
—— *crispus* and *obtusifolius*. Troublesome weeds.
—— *acutus*. Moist shady places.
—— *pulcher*. Dry banks, not uncomn.
—— *Acetosa*. Very common.
—— *Acetosella*. Dry pastures in several places.
Daphne Mezereum. Hedges occasionally, but very rare.
—— *Laureola*. Woods and groves, ra.
Thesium linophyllum. Open banks at Hildersham.
Mercurialis perennis. Common in hedges and woods.
—— *annuus*. A weed in gardens, but local.
Euphorbia helioscopia and *Peplus*. Common weeds.
—— *platyphylla*. Corn-fields, v. ra.
—— *Cyparissias*. Plantations at Audley End.
—— *exigua*. Corn-fields &c. freq.
—— *Lathyris*. Rich waste ground, occasionally.
—— *amygdaloides*. Shady hedges and groves.
Urtica dioica and *urens*. Too com. weeds
Parietaria officinalis. Under walls &c.
Humulus Lupulus. Hedges, not uncom.
Ulmus campestris, *suberosa* and *glabra*. Frequent in hedges.
—— *montana*. Hedges, not very comn.
Betula alba. Hedges and woods occasio.
Alnus glutinosa. Moist woods &c. freqt.
Salix Helix. At Chesterford.
—— *triandra* and *Hoffmanniana*? Osier ground.
—— *amygdalina*. Hedges at Sewers End.
—— *fragilis*. Frequent.
—— *Russelliana*. Audley End.
—— *alba*. Very common.
—— *vitellina*. Hedges in several places.

Salix viminalis. Osier-ground, &c.
—— *cinerea*, *aquatica* and *oleifolia.* Hedges &c. frequent.
—— *caprea.* Hedges, not uncommon.
Populus tremula. Woods, frequent.
——— *nigra.* Banks of rivers &c. In several places.
Fagus sylvatica. Woods and hedges, oc.
Quercus Robur. Abundant.
——— *sessiliflora.* Frequent.
Corylus Avellana. Very common.
Carpinus Betulus. Woods, frequent.
Juniperus communis. Rare; (once grew at Hadstock).
Alisma Plantago. Ditches and ponds, fr.
Sagittaria sagittifolia. At Chesterford, rather rare.
Butomus umbellatus. Near Sampford, ra.
Arum maculatum. Hedges, common.
Typha latifolia. About Duxford.
Sparganium ramosum. Ditches and ponds frequent.
Lemna trisulca. Ditches, rare.
—— *minor.* Abundant.
Potamogeton densus. Pond at Audley End
———— *crispus.* Ponds in several pl.
———— *natans.* Common.
Zannichellia palustris. Pond at Audley End, rare.
Paris quadrifolia. Hales wood and other places.
Fritillaria Meleagris. Meadows near Bumpsted, rare.
Allium vineale. At Hildersham, sparingly
Ornithogalum umbellatum. Hinxton.
Hyacinthus non-scriptus. Groves and thickets, common.
Juncus glaucus, *effusus* and *conglomeratus.* Watery places, frequent.
—— *acutiflorus* and *obtusiflorus.* Linton, not common.
—— *lampocarpus.* Marshy places, com.
—— *compressus.* Marshes, occasionally
—— *bufonius.* Road-sides, common.
Luzula sylvatica. Woods, common.
——— *Forsteri.* Not rare in woods.
——— *campestris.* Dry pastures, freqnt.
Neottia spiralis. Near Linton, rare.
Listera ovata. Woods in several places.
——— *Nidus-avis.* Moist woods, very r.
Epipactis latifolia. At Debden, &c.
——— *grandiflora.* Shortgrove Park, &c. sparingly.
Orchis Morio. Pastures, not uncommon.
—— *conopsea.* Clay pastures, rare.
—— *mascula.* Woods &c. plentiful.
—— *ustulata.* At Linton, rare.
—— *pyramidalis.* Chalky banks, not un.
—— *latifolia.* Marshy ground.
—— *maculata.* Common.
Habenaria viridis. At Wimbush.
——— *bifolia.* Woods at Debden, &c
Aceras anthropophora. Very rare at Linton
Ophrys apifera. Pastures &c. in sev. pl.
——— *aranifera.* Dry open chalky banks near Hildersham, very sparingly.
——— *muscifera.* Woods at Widdington &c. rare.
Iris Pseudacorus. Osier ground, not very common.
— *fœtidissima.* Woods, but rare.
Crocus sativus. This plant, formerly cultivated here to so great an extent as to form the principal trade of the town, from which its name "Saffron" is derived, had been long entirely extinct till a few years ago, when some plants came up in newly trenched ground; these have however nearly disappeared again. The cultivation of it has ceased for about half a century; and the fact of its having so soon become extinct clearly demonstrates that it has but little claim to be included among our native or even naturalized plants.
Narcissus biflorus. Once found near Little Walden.
——— *Pseudo-Narcissus.* Meadows near Quendon, rare.
Galanthus nivalis. Old orchard, Littlebury
Tamus communis. Hedges, not uncomn.
Scirpus lacustris. Pond at Audley End.
——— *setaceus* and *Eleocharis palustris.* At Audley End.
Eleocharis multicaulis. At Ickleton.

Eriophorum polystachion and *angustifolium.* Ickleton and Sawston.
Carex stellulata. Near Bartlow &c.
—— *remota, intermedia* and *divulsa.* Moist meadows, at Chesterford &c.
—— *vulpina.* Ditches, common.
—— *paniculata.* In the park &c.
—— *acuta.* At Chesterford.
—— *sylvatica.* Woods, not uncommon.
—— *pendula.* Shady hedges in sev. pl.
—— *recurva.* Common.
—— *præcox.* Dry banks at Hildersham.
—— *pilulifera.* At Chesterford.
—— *hirta.* Woods and hedges, freqnt
—— *ampullacea.* Chesterford.
—— *paludosa.* Road-sides.
—— *riparia.* Osier-ground &c. comn.
—— *panicea.* At Ickleton.
Anthoxanthum odoratum and *Alopecurus pratensis.* Plentiful.
Alopecurus agrestis. Fields and road-sides, frequent.
——— *geniculatus.* Banks of ponds, not uncommon.
Phleum pratense. Abundant.
Milium effusum. Woods, occasionally.
Calamagrostis lanceolata. Moist woods, rather rare.
Agrostis canina. Marshy ground, comn.
——— *vulgaris* and *alba.* Hedge-banks and moist meadows, common.
Catabrosa aquatica. Ditches in the Park.
Aira cristata. Dry chalky banks, freqnt.
—— *cæspitosa.* Shady places, frequent.
—— *caryophyllea.* Dry banks &c. not un.
Melica cærulea. At Ashdon, but rare.
Holcus mollis. Hedges and woods.
—— *lanatus* and *Arrhenatherum avenaceum.* Abundant.
Poa aquatica, River at Littlebury.
— *fluitans.* Ponds and ditches, freqnt.
— *rigida* and *compressa.* Walls and dry ground, not uncommon.
— *trivialis, pratensis* & *annua.* Very fr.
— *nemoralis.* Woods in several places.
Triodia decumbens. Chesterford, rather ra.
Briza media. Meadows, frequent.
Dactylis glomerata. Abundant.
Cynosurus cristatus. Pastures &c. freqnt.
Festuca ovina and *duriuscula.* Dry pastures &c. not uncommon.
——— *bromoides.* Linton, rather rare.
——— *loliacea.* In the Park, not comn.
——— *pratensis.* Very frequent.
——— *elatior.* Moist shady places, com.
Bromus giganteus and *asper.* Hedges and thickets in several places.
——— *sterilis.* Pastures and hedges, fr.
——— *secalinus.* Corn-fields occasionally, but rare.
——— *mollis.* Abundant.
——— *racemosus.* Meadows &c. not un.
——— *erectus.* Near Littlebury, rare.
Avena fatua. Too abundant in corn-fields.
—— *pratensis.* Near Hildersham.
—— *pubescens.* Dry banks in several pl.
—— *flavescens.* Plentiful.
Arundo Phragmites. Marshy ground, not uncommon.
Elymus europæus. Woods, but rare.
Hordeum murinum. Walls and dry ground frequent.
——— *pratense.* Meadows, not uncom.
Triticum caninum and *repens.* Too abndt.
Brachypodium pinnatum. Open banks &c. occasionally, rather rare.
———— *sylvaticum.* Wds. & hdges
Lolium perenne. Very abundant.
——— *temulentum.* Corn-fields, not unc.
——— *arvense.* Corn-fields, rare.
Phalaris canariensis. Waste ground, oc.
——— *arundinacea.* Banks of ponds, not rare.
Polypodium vulgare. Shady hedges, occa.
Aspidium Filix-mas. Hedges &c. not un.
Asplenium Trichomanes. Walls at Wicken, rare.
——— *Ruta-muraria.* Walls at Audley End.
Scolopendrium vulgare. Hedges &c. ra. r.
Pteris Aquilina. Not plentiful.
Botrychium Lunaria and *Ophioglossum vulgare.* Near Linton, but rare.
Equisetum fluviatile. Watery places, oc.
——— *arvense.* Corn-fields &c. com.
——— *palustre.* Marshy ground, fre.

Saffron Walden, 1842.

G. S. Gibson.

ART. CII. — *A List of the rarer Flowering Plants and Ferns of the Neighbourhood of Dumfries; with Remarks on the Physical Conditions of the District.* By PETER GRAY, Esq.

ANNEXED is a list of the less common flowering plants and ferns, growing in the vicinity of Dumfries; and perhaps, by way of introduction, a hasty sketch of the boundaries and physical aspect of the region thus illustrated, may not be altogether inappropriate.

The Nith, in its course through the district to which it gives name, flows through three basins or valleys, which, according to the speculations of some geologists, have, at a remote period, formed the beds of as many lakes, successively drained by the river into the Solway Frith. The lowest of these, the vale of Dumfries, is enclosed on all sides, except the south, by hills chiefly composed of greywacké, and, viewed from the heights around that town, presents a natural amphitheatre of great beauty; the undulating surface characteristic of the new red sandstone formation, here the predominating one, together with the intersecting ridges that mark the outer channels of the principal river and its tributary streams, tending pleasingly to diversify the scenery of the interior.

The immediately environing hills are of no great height; but, on the north, the Moffat range, and among them Queensberry, which attains an elevation of 2259 feet, overtop these, and, although at some distance, appear continuous. On the west, the numerous ravines between them are filled, and the hills themselves belted or crowned with, plantations of modern growth, abounding in Rubus saxatilis, Vaccinium Myrtillus, Polypodium Phegopteris and Dryopteris; where bare of wood, Gymnadenia conopsea, G. albida, Habenaria viridis and Lycopodium clavatum, alpinum, Selago and selaginoides, are also met with. Criffel, a syenitic hill 1895 feet high, forms the southern terminus of these hills, and although good ground for the cryptogamist, is nowise rich in the rarer flowering plants. Loch Kinder, at its base, furnishes Lobelia Dortmanna in abundance.

On the south-east, and approaching close upon the town, lies the extensive morass of Lochar Moss, occupying many thousand acres. Although not perhaps so fruitful in botanical rarities as might be anticipated from its great extent, this moss contains a few good plants. Among these may be enumerated the pretty little Utricularia minor, in some places exceedingly abundant, Ranunculus Lingua, Drosera longifolia and anglica, Bidens tripartita, with several of lesser note.

I shall just particularize another locality, to which frequent reference will be made in the catalogue. Near the suburb of Maxwelton there is, or rather has been, a system of small lochs, now all drained, with the exception of the last of the series, itself considerably reduced in size. This little district, while it may be said to present an epitome of the dale in its geographical details, affords also almost every species found in the valley, with others—such as Carex limosa, C. filiformis, Eriophorum pubescens, Lysimachia vulgaris and Lycopus europæus—that have not been observed in any other part of the latter. These circumstances, together with its proximity to the town, render it the favourite haunt of our Dumfries botanists.

Aira caryophyllea and *flexuosa*. Very com.

—— *præcox*. Glen.

Alisma ranunculoides. Maxwelton Loch, abundant; very luxuriant in ditches near Carlaverock castle.

Allium vineale. Banks of Nith near Lincluden abbey.

Alsine marina. Shores of the Solway.

—— *rubra*. On a wall opposite Portland place, Maxwelton.

Ammophila arenaria. Nith nr. Carsethorn.

Anchusa sempervirens. Near Rosehall; Catton's loaning. In both places in all likelihood introduced.

Anagallis tenella. Abundant near Burran point.

Andromeda polifolia. Terregles wood; about Maxwelton loch: plentiful.

Avena pratensis. Terregles, banks of the Nith, &c.

—— *pubescens*. Craigs.

Berberis vulgaris. Plntatns. nr. Lincluden

Bidens cernua. Lochar-moss; abundant.

—— *tripartita*. Lochar-moss.

Brachypodium sylvaticum. Craigs; banks of the Nith, &c.

Bromus asper. Woods & hedges, not unc.

—— *erectus*. New Abbey church-yard

—— *racemosus*. Banks of the Nith and near Terregles.

—— *secalinus*. In wheat-fields.

Calamintha Acinos. Castle-Douglas road, about a mile from Dumfries; Glen; sparingly in both localities.

Campanula latifolia. Banks of Nith near Lincluden abbey; Cluden craigs; hazel-copse near Grove.

Cardamine amara. Cluden craigs.

Carex dioica. Near Maxwelton loch; Irongray hills.

—— *filiformis*. Near Maxwelton loch.

—— *fulva*. About Maxwelton loch.

—— *muricata*. Near Lincluden abbey.

—— *Œderi*. About Maxwelton loch.

—— *pilulifera*. Irongray hills.

—— *limosa*. Terregles woods; boggy ground near Maxwelton loch.

Carum verticillatum. Very abundant about Maxwelton loch; meadow near Mabie-moss.

Catabrosa aquatica. Moat of Carlaverock castle.

Cerastium arvense. Bank a little beyond Portland-place; near Cluden new bridge.

Cerasus avium. Bank nr. Lincluden abbey

—— *Padus*. Pretty general in the northern parts of the district.

Cheiranthus Cheiri. Walls of Lincluden and Sweetheart abbeys; plentiful on the latter.

Circæa Lutetiana. Glen.

Drosera anglica & *longifolia*. Lochar-moss

Epipactis latifolia. Mavis-grove wood.

Eriophorum pubescens. Maxwelton loch.

Festuca bromoides. Fields, dykes & roadsides, common.

Gagea lutea. Hazel-copse nr. Grove, abt.

Galium boreale. Bank of Nith in sev. pl.
Genista anglica. Terregles woods.
——— *tinctoria.* Dalscairth hills.
Gentiana campestris. Dalscairth hills; Glen.
Gymnadenia albida. Dalscairth hills, pl.
——— *conopsea.* Dalscairth hills; Maxwelton loch.
Habenaria chlorantha. Maxwelton loch and Terregles woods.
——— *viridis.* Dalscairth hills, spar.
Hippuris vulgaris. Lochar-moss.
Hypericum hirsutum. Glen.
Jasione montana. Not uncommon.
Lathræa squamaria. Hazel-copse near Grove, but very sparingly.
Lepidium Smithii. Road-sides and on light soils, very common.
Linaria vulgaris, var. *Peloria.* Hedge nr. Kelton.
Littorella lacustris. Margin of the Cluden, above Lincluden abbey.
Lobelia Dortmanna. Loch Kinder, abundant; less so in Loch Lotus.
Lycopus europæus. About Maxwelton loch
Lysimachia vulgaris. About Maxwelton Loch, sparingly.
Lythrum Salicaria. Not uncommon.
Malva moschata. Banks of the Nith.
Melica uniflora. Glen; Mavis-grove wd.
Meum Athamanticum. Banks of the Cluden, above Routing bridge.
Milium effusum. Cluden craigs; Mavis-grove woods, &c.
Molinia cærulea. About Maxwelton loch.
Myosotis repens. Boggy ground nr. Maxwelton loch.
Myrica Gale. Abundant and luxuriant in Terregles woods; Maxwelton lo.
Nasturtium terrestre. Upon the quay at Dumfries.
Nuphar lutea. In the river Lochar.
Ornithopus perpusillus. About Maxwelton loch, and several other localities, abundant.
Orobanche major. Harleybank; Craigs; Cluden craigs.
Parnassia palustris. Abt. Maxwelton loch
Phalaris canariensis. Cultivated ground.
Poa aquatica. Moat of Carlaverock-castle
— *maritima.* Shores of the Solway nr. Carlaverock-castle.
Polemonium cæruleum. Catton's loaning.
Polygonum Bistorta. Banks of Nith opposite Dumfries; Cluden craigs.
Pyrola media. Dalscairth hills.
Ranunculus Lingua. Lochar-moss; Mabie-moss.
Ribes Grossularia. Not uncommon.
—— *nigrum.* Banks of the Nith, about a quarter of a mile below Ellisland.
—— *rubrum.* Cluden-craigs; banks of Cluden above Routing-bridge
Rottbollia incurvata. Shores of the Solway
Rubus saxatilis. Dalscairth woods.
Sanguisorba officinalis. Field near Mabie-moss; near Kelton.
Samolus Valerandi. Maxwelton loch; ditch near Kingholm-quay; Nith below Glencaple.
Sambucus Ebulus. Fields near Netherwood, and below the Dumfries observatory.
Saxifraga granulata. Banks of Nith and Cluden.
Scirpus pauciflorus. Lochar-moss; about Maxwelton loch.
Sedum anglicum. Road-sides near Portland-place and Dalscone; hills near Shambelly wood; abundant.
Silene maritima. Beach below Glencable.
Solanum Dulcamara. Plantation near Kingholm-quay; near Lincluden-abbey.
Sparganium simplex. Maxwelton loch,
Statice Limonium. Shores of the Solway at Burran-point.
Stellaria glauca. Maxwelton loch.
——— *nemorum.* Bank near Lincluden abbey: Cluden craigs.
Symphytum officinale. Banks of Nith nr. Albany-place.
Triodia decumbens. Maxwelton loch.
Trollius europæus. Glen: Routing-bridge, abundant.
Vaccinium Myrtillus. Dalscairth, Sham-

belly, and Terregles woods, &c. common.

Vaccinium Oxycoccos. Terregles wood; Lochar-moss.

Utricularia minor and *vulgaris.* Lochar-moss.

Valeriana pyrenaica. Banks of the Cluden in several places; plentiful about Routing bridge.

Veronica Anagallis. Growing luxuriantly in a ditch near Dalscairth.

—— *Buxbaumii.* Near Rosehall.

—— *montana.* Mavis-grove wood; glen above Irongray manse.

Viburnum Opulus. Mavis-grove wood; Glen.

Viola palustris. Plantation nr. Lincluden.

Allosorus crispus. Near Carsethorn; road-side near craigs.

Botrychium Lunaria. Glen.

Cystopteris fragilis. Cluden craigs.

Lycopodium alpinum. Dalscairth hills.

—— *clavatum.* Dalscairth hills; Lochar-moss.

—— *selaginoides.* Criffel; Dalscairth hills.

—— *Selago.* Abundant on the summit of Criffel; sparingly on Dalscairth hills.

Polypodium Dryopteris. Cluden craigs; Dalscairth woods.

—— *Phegopteris.* Road-side near Mabie; Dalscairth woods.

Scolopendrium vulgare. Cluden craigs, abundant; Glen. In the latter sta- the fronds are, almost without exception, irregular.

Peter Gray.

Dumfries, November 12, 1842.

Art. CIII. — *Some Account of the Botanical Collections recently made by Dr. Theodore Kotschy (for the Wurtemburg Botanical Union) in Nubia and Cordofan.* Communicated by Mr. Wm. Pamplin, jun.

(Continued from p. 390)

Third, in the province Berber, the city Chartum and the village Gubba, the island Tutti near Chartum; the villages Abu Haschim, Abu Hamed, with the island Mograd and Kalebsche, and the great desert of Berber. It is therefore evident that our traveller made best use of the short space of time allotted to him, in extending his excursions as much as possible through a great variety of locality, namely, mountains, hills, plains, lakes, river-sides &c., circumstances however prevented him in a great measure from taking the altitudes and noting other particulars of the mountainous districts.

In the third place, a conspectus of the natural orders and number of species in each family of which the collection consists, is here given, namely: —

ORDERS.	SPECIES.	ORDERS.	SPECIES.	ORDERS.	SPECIES.
Marsileaceæ	1	Brought up	93	Brought up	270
Alismaceæ	3	Compositæ	28	Cassieæ	16
Hydrocharideæ	4	Portulacaceæ	12	Mimoseæ	5
Gramineæ	48	Cucurbitaceæ	10	Corniculatæ	2
Cyperoideæ	15	Labiatæ	9	Aizoideæ	14
Commelinaceæ	2	Asperifoliaceæ	12	Rosaceæ	1
Juncaceæ	1	Convolvulaceæ	18	Onagreæ	5
Palmæ	1	Polygalaceæ	3	Lythrarieæ	7
Coronarieæ	1	Personatæ	30	Tetradynamæ	6
Characeæ	1	Solanaceæ	7	Capparideæ	6
Amentaceæ	1	Lysimachiaceæ	2	Violaceæ	1
Urticaceæ	1	Asclepiadeæ	3	Rutaceæ	24
Nyctagineæ	3	Contortæ	1	Sapindaceæ	4
Aristolochieæ	1	Sapotaceæ	1	Malvaceæ	20
Laurineæ	1	Umbelliferæ	1	Geraniaceæ	4
Plumbagineæ	1	Terebinthaceæ	1	Theaceæ	1
Rubiaceæ	8	Papilionaceæ	39	Tiliaceæ	7
	—				—
	93		270	Total Species,	393

From the above enumeration it appears that the Gramineæ and Cyperaceæ amount to 62 species; the Papilionaceæ to 39; the Personatæ to 30; the Compositæ to 27; the Rutaceæ to 24; and the Malvaceæ to 20.

W. PAMPLIN JUN.

(To be continued).

ART. CIV.—*Notice of 'The Botanical Looker-Out among the Wild Flowers of the Fields, Woods and Mountains of England and Wales.'* By EDWIN LEES, F.L.S., &c. London: Tilt & Bogue, Fleet Street. H. Davies, Cheltenham. 1842.

WE have already given a few extracts from this work (Phytol. 301), and as our limits are very circumscribed, we cannot now do better than allow the author himself to explain the design and scope of the book before us.

"I WILL admit *in limine* that I am not here writing to instruct the professional student of Botany. Neither do I aim to surprise my brother botanists by any new arrangements in classification or discoveries in physiology. But if I take a humbler rank than the dignity of science may seem to warrant, and thus make no advances in their estimation, still I hope I may be in some degree *useful* in attracting the *many* to the pleasures afforded by an examination of plants in their wild localities, and thus, indirectly at least, subserve the cause of Natural History, by enlisting recruits, whose enthusiasm may perchance be awakened by my incitations to observation and adventure.

"In my experience as a practical collecting botanist for some years, I have invariably found that however my botanical friends might take fire at the exhibition of my specimens or the mention of their habitats, that the uninitiated in these things were unable to comprehend the sources of my pleasure, and could not understand on what principle I could experience delight in making long journeys, and taking fatiguing rambles, merely in search of plants. * * The neglect of physical and mental enjoyment lying within the reach of almost every body, appears to me to arise from a false supposition that the toils attendant upon the study of Botany would greatly counterbalance any pleasure to be derived from it. In these papers, then, I aim to show how incorrect such a conclusion is;—and, in monthly order, my object has been to produce delineations which, even to the general eye of those unfamiliar with botanical terms, shall offer charms which may tempt the leisure of those who desire a pleasing and instructive occupation; while I have introduced *incident* to show that the botanist, during his rambles, may still look out with all the gusto of a traveller superadded to his scientific examinations—while the stores of his collecting-book will make "a wet day at an inn" very different from "the wet day" so graphically described by Washington Irving."

* * * *

"Treating the subject thus lightly, I may hope to attract some whose attention would shrink from the study of more laboured treatises—and the ardent enquirer, if he accompanies me for *excitement*, will find abundant works before the public, where the sparks here kindled, may contribute fuel to the continuation and duration of the scientific flame he desires to nourish with increasing and perennial vigour. Even the proficient in botanical study may not be displeased with the allusions made to the habitats of some of his favourites; since as iron sharpeneth iron, so is enterprise awakened by the narration of the humblest pilgrim to the shrine that is the object of the reverence of his fraternity."—Preface.

Were we disposed to be critical, we might perchance quarrel a little with the author's style, and say that it is, in some places, rather too sentimental; but this, if it be a fault at all, is one into which a writer may readily fall, if, when he treats of flowers, they suggest to his mind other ideas than such as relate simply to their utility or scientific arrangement. However, "take it for all in all," we hail the 'Botanical Looker-Out' as a very agreeable contribution to our stock of popular works on Botany.

ART. CV.—*Varieties.*

227. *A Catalogue of Plants found growing in the neighbourhood of Wrexham, in Denbighshire.*

Veronica serpyllifolia
    scutellata
    Anagallis
    Beccabunga
    officinalis
    montana
Veronica Chamædrys
    hederifolia
    agrestis
    arvensis
Pinguicula vulgaris
Lycopus europæus
Circæa Lutetiana
Anthoxanthum odoratum
Valeriana rubra
    dioica
    officinalis
Fedia olitoria

Fedia dentata
carinata
Iris Pseud-acorus
Rhynchospora alba
Scirpus lacustris
setaceus
sylvaticus
Eleocharis palustris
multicaulis
Eriophorum vaginatum
angustifolium
Nardus stricta
Alopecurus pratensis
geniculatus
fulvus
Phalaris arundinacea
Phleum pratense
Milium effusum
Agrostis canina
vulgaris
alba
Catabrosa aquatica
Aira cæspitosa
flexuosa
caryophyllea
præcox
Melica uniflora
cærulea
Holcus mollis
lanatus
Arrhenatherum avenaceum
Poa aquatica
fluitans
rigida
trivialis
pratensis
annua
Triodia decumbens
Briza media
Dactylis glomerata
Cynosurus cristatus
Festuca ovina
bromoides
myurus
loliacea
pratensis
Bromus giganteus
asper
Bromus sterilis
secalinus
mollis
Avena fatua
strigosa
pubescens
flavescens
Arundo Phragmites
Triticum caninum
repens
Brachypodium sylvaticum
pinnatum
Lolium perenne
temulentum
Montia fontana
Dipsacus pilosus
sylvestris
Knautia arvensis
Scabiosa succisa
columbaria
Galium verum
cruciatum
palustre
saxatile
Aparine
Asperula odorata
Sherardia arvensis
Plantago major
lanceolata
Coronopus
Cornus sanguinea
Alchemilla vulgaris
arvensis
Potamogeton gramineus
crispus
perfoliatus
rufescens
natans
Sagina procumbens
apetela
Echium vulgare
Lithospermum arvense
officinale
purpuro-cæruleum, (Denbigh)
Symphytum officinale
Lycopsis arvensis
Myosotis arvensis
Myosotis
cæspitosa
versicolor
Cynoglossum officinale
Anagallis arvensis
tenella
Lysimachia nemorum
Nummularia
Primula vulgaris
veris
elatior
Hottonia palustris
Menyanthes trifoliata
Erythræa Centaurium
Datura Stramonium
Atropa Belladonna
Solanum Dulcamara
nigrum
Verbascum Thapsus
Lychnitis (abundnt.)
thapsiforme
virgatum
Convolvulus arvensis
sepium
Vinca major, (doubtfully wild)
minor, (ditto).
Jasione montana
Campanula rotundifolia
latifolia
rapunculoides
Trachelium
Lonicera Periclymenum
Rhamnus catharticus
Euonymus europæus
Viola hirta
odorata
palustris
canina
tricolor
lutea
Hydrocotyle vulgaris
Sanicula europæa
Helosciadium nodiflorum
inundatum
Sison Amomum
Ægopodium Podagraria
Bunium flexuosum

Pimpinella Saxifraga
Sium angustifolium
Œnanthe fistulosa
peucedanifolia
crocata
Phellandrium
Æthusa Cynapium
Fœniculum vulgare
Angelica sylvestris
Heracleum Sphondylium
Daucus Carota
Torilis Anthriscus
nodosa
Scandix Pecten
Anthriscus sylvestris
vulgaris
Chærophyllum temulentum
Myrrhis odorata
Conium maculatum
Chenopodium Bonus-Henricus
hybridum ?
album
Viburnum Opulus
Sambucus Ebulus
nigra
Parnassia palustris
Linum catharticum
Drosera rotundifolia
Berberis vulgaris
Peplis Portula
Galanthus nivalis
Narcissus Pseudo-narcissus
Convallaria majalis
Allium ursinum
vineale
Ornithogalum nutans
Hyacinthus non-scriptus
Narthecium ossifragum
Juncus glaucus
effusus
conglomeratus
acutiflorus
lampocarpus
uliginosus
bufonius
squarrosus
Luzula sylvatica
pilosa

Luzula campestris
Rumex Hydrolapathum
crispus
sanguineus, *α.* and *β.*
acutus
obtusifolius
Acetosa
Acetosella
Triglochin palustre
Alisma Plantago
Chlora perfoliata
Erica Tetralix
cinerea
Calluna vulgaris
Vaccinium Myrtillus
Vitis-Idea
Oxycoccos
Epilobium angustifolium
hirsutum
parviflorum
montanum
tetragonum
palustre
Daphne Laureola
Polygonum Bistorta
aviculare
Fagopyrum
Convolvulus
amphibium
Persicaria
lapathifolium
Hydropiper
Paris quadrifolia
Adoxa Moschatellina
Scleranthus annuus
Chrysosplenium alternifolium
oppositifolium
Saxifraga granulata
tridactylites
Saponaria officinalis
Silene inflata
Stellaria media
holostea
graminea
uliginosa
Arenaria trinervis
serpyllifolia
rubra

Cotyledon Umbilicus
Sedum Telephium
anglicum
acre
Oxalis Acetosella
Agrostemma Githago
Lychnis Flos-cuculi
dioica
Cerastium vulgatum
viscosum
aquaticum
Spergula arvensis
Lythrum Salicaria
Agrimonia Eupatoria
Reseda Luteola
Sempervivum tectorum
Prunus spinosa
Padus
Cerasus
Cratægus Oxyacantha
Pyrus Malus
aucuparia
Spiræa Ulmaria
Rosa spinosissima
villosa
tomentosa
canina
systyla
arvensis
Rubus Idæus
suberectus
fruticosus
saxatilis
Fragaria vesca
elatior
Comarum palustre
Potentilla anserina
Fragariastrum
Tormentilla officinalis
reptans
Geum urbanum
rivale
Papaver Argemone
dubium
Rhœas
Meconopsis Cambrica
Chelidonium majus
Helianthemum vulgare

Tilia europæa
Helleborus viridis
Aquilegia vulgaris
Stratiotes aloides
Thalictrum minus
Clematis Vitalba
Anemone nemorosa
Ranunculus aquatilis
hederaceus
Flammula
Ficaria
auricomus
sceleratus
acris
repens
bulbosus
arvensis
parviflorus
Trollius europæus
Caltha palustris
Mentha sylvestris
hirsuta
gentilis
arvensis
Thymus Serpyllum
Origanum vulgare
Teucrium Scorodonia
Ajuga reptans
Ballota nigra
Galeobdolon luteum
Galeopsis Tetrahit
versicolor
Lamium album
purpureum
Betonica officinalis
Stachys sylvatica
ambigua
palustris
arvensis
Nepeta Cataria
Glechoma hederacea
Acinos vulgaris
Calamintha officinalis
Clinopodium vulgare
Prunella vulgaris
Bartsia Odontites
Euphrasia officinalis
Rhinanthus Crista-galli
Melampyrum pratense
Lathræa squamaria
Pedicularis palustris
sylvatica
Antirrhinum majus
Linaria Cymbalaria
Elatine
vulgaris
Scrophularia nodosa
Digitalis purpurea
Verbena officinalis
Coronopus Ruellii
Capsella Bursa-pastoris
Lepidium campestre
Smithii
Draba verna
Cardamine amara
pratensis
impatiens
hirsuta
Arabis hirsuta
Barbarea vulgaris
Nasturtium officinale
terrestre
Sisymbrium officinale
Sophia
Thalianum
Erysimum Alliaria
Cheiranthus Cheiri
Brassica Napus
Rapa
Sinapis arvensis
nigra
Raphanus Raphanistrum
Erodium cicutarium
Geranium pratense
lucidum
molle
robertianum
dissectum
columbinum
Malva sylvestris
rotundifolia
moschata
Corydalis claviculata
Fumaria capreolata
officinalis
Polygala vulgaris
Ulex europæus
Genista tinctoria
Cytisus Scoparius
Ononis arvensis
Anthyllis Vulneraria
Orobus tuberosus
Lathyrus Nissolia
pratensis
sylvestris
Vicia sylvatica
Cracca
sativa
angustifolia
sepium
Bithynica
Ervum hirsutum
Astragalus glycyphyllos
Ornithopus perpusillus
Melilotus officinalis
Trifolium repens
pratense
arvense
striatum
procumbens
filiforme
Lotus corniculatus
major
Medicago sativa
lupulina
maculata
Hypericum Androsæmum
quadrangulum
perforatum
humifusum
montanum
hirsutum
pulchrum
elodes
Tragopogon pratensis
Helminthia echioides
Sonchus arvensis
oleraceus
Prenanthes muralis
Leontodon Taraxacum
Apargia hispida
Hieracium Pilosella
Lawsoni ?
murorum

Hieracium sylvaticum
paludosum
sabaudum
umbellatum
Crepis virens
Hypochæris radicata
Lapsana communis
Cichorium Intybus
Arctium Lappa
Carduus nutans
Cnicus lanceolatus
palustris
pratensis
Carlina vulgaris
Bidens cernua
Eupatorium cannabinum
Tanacetum vulgare
Artemisia Absinthium
vulgaris
Gnaphalium germanicum
uliginosum
Conyza squarrosa
Tussilago Farfara
Petasites vulgaris
Senecio vulgaris
sylvaticus
tenuifolius
Jacobæa
aquaticus
saracenicus
Solidago Virgaurea
Pulicaria dysenterica
Bellis perennis
Chrysanthemum Leucanthemum
segetum
Pyrethrum Parthenium
inodorum
Matricaria Chamomilla
Anthemis arvensis
Achillæa Ptarmica
Millefolium
Centaurea nigra
Cyanus
Centaurea Scabiosa
Orchis mascula
Morio
pyramidalis
latifolia
maculata
Gymnadenia conopsea
Habenaria viridis
bifolia
Ophrys apifera
Listera ovata
Nidus-avis
Epipactis latifolia
palustris
Euphorbia helioscopia
exigua
Peplus
Callitriche verna
Zannichellia palustris
Typha latifolia
angustifolia
Sparganium ramosum
simplex
Carex pulicaris
vulpina
paniculata
stellulata
ovalis
remota
pendula
sylvatica
Pseudo-Cyperus
Œderi
binervis
præcox
panicea
recurva
cæspitosa
stricta
acuta
paludosa
vesicaria
ampullacea
Carex hirta
Alnus glutinosa
Urtica urens
dioica
Bryonia dioica
Myriophyllum verticillatum
Sagittaria sagittifolia
Arum maculatum
Poterium Sanguisorba
Empetrum nigrum
Ruscus aculeatus
Viscum album
Humulus Lupulus
Tamus communis
Mercurialis perennis
Taxus baccata (wild)
Atriplex angustifolia
Ceterach officinarum
Polypodium vulgare
Phegopteris
Dryopteris
Polystichum lobatum
angulare
Lastræa Oreopteris
Filix-mas
dilatata
Cystopteris fragilis
Asplenium Trichomanes
Ruta-muraria
Adiantum-nigrum
Athyrium Filix-fœmina
Scolopendrium vulgare
Pteris Aquilina
Lomaria Spicant
Osmunda regalis
Botrychium Lunaria
Ophioglossum vulgatum
Equisetum fluviatile
arvense
sylvaticum
limosum
palustre
hyemale

—*John Rowland; Queen St., Wrexham, July* 9, 1842.

228. *Note on Bryum pyriforme*, (Phytol. 398). In the 'Muscologia Britannica' of Hooker and Taylor, it is stated that this moss "is remarkable in the shape of its leaves, of which the upper ones are the longest and most flexuose. They are composed, moreover, except at the very base, almost wholly of nerve; there being only a

narrow membranous margin, which, *towards the extremities*, is deeply serrated." These remarks apply only to the perichætial leaves (for the others are without serratures), and the term "deeply serrated" is somewhat too strong, even when thus limited. I have no doubt whatever that the same meaning was intended to be conveyed in the 'British Flora;' but that through an error of the transcriber (in the attempt perhaps to abbreviate the passage) the language there used has a quite different import. I have examined all the specimens in the herbarium of the author, and can therefore assure Mr. Gibson that two species have not been confounded under this name. Bryum pyriforme is indeed a peculiar species; the moss most resembling it is B. gracile (*Wilson*). In a barren state it has considerable affinity with Phascum alternifolium of Schwægrichen; but when in fruit, I know of no moss, whether British or foreign, which is likely to be mistaken for it. It is moreover one of the very few mosses which produce "anthers and pistils" within the same envelope; a circumstance which has not escaped the notice of Bruch and Schimper in their elaborate 'Bryologia Europæa.' In case this work should not be in Mr. Gibson's possession, I may mention that several new species, allied to B. cæspititium, have been introduced into it; and it may be worth while for those who have the opportunity, carefully to examine and compare such mosses as generally pass for B. capillare, B. turbinatum &c., in their various aspects and localities, with a view to ascertain the validity of the distinctions insisted upon in that work.—*W. Wilson ; Warrington, November* 7, 1842.

[The following note may be interesting to some of our readers ; it is in reply to an enquiry respecting the beautiful Hierochloe borealis.—*Ed.*]

229. *Note on Hierochloe borealis.* I fear it will be a very difficult matter to get a British specimen of Hierochloe borealis ; and I think I run no risk of contradiction when I say there is not a *living* botanist who has gathered it. For several years when residing in Angus-shire (my native county), my attention was directed to its discovery, but without success. The locality given in Hooker's 'British Flora,'--"a narrow mountain valley called *Kella*, in Angus-shire," I was never able to find. There is, about three miles from Arbroath, a place called Kelly-glen, that is a narrow valley but not a mountain one; neither do I think the plant in question is to be found there, at any rate I was never so fortunate as to find it, nor have Professors Graham and Balfour, nor any of the numerous parties which almost annually proceed from Edinburgh to the mountains of Angus-shire, ever met with it. — *James Cruickshank ; Crichton Institution, Dumfries, November* 7, 1842.

230. *Potentilla tridentata.* There are several others of the late Mr. G. Don's discoveries which have never been found except by himself, such as Potentilla tridentata; of which very rare plant I possess an original specimen, given me by Mr. James Reid, gardener to Sir James Carnegie, of Southesk. There is no locality attached to the specimen ; and Mr. Reid informed me that although an intimate friend of Mr. Don, he knew the localities of very few of his rare plants.—*Id.*

231. *Phascum axillare and patens.* About a fortnight since I found Phascum axillare in fruit, in great profusion, on the bank of a newly made ditch near the Reigate station of the Dover Railway, where the soil is particularly light. It appeared to me so very early for the fruiting of this moss (March being the time given in Hooker's Flora) that I thought the fact worth recording. The axillary capsule renders this species particularly interesting, and indeed I think it the most beautiful of our Phasca. At the same time I found Phascum patens in fruit : this was also growing on the side of a newly made ditch, near the above-named spot, the soil a stiff clay ; it was by no

means plentiful. This very minute but interesting moss differs very widely from the other species of the genus, in its patent serrated leaves, which are beautifully reticulated, with the nerve disappearing below the point. I shall be glad to supply any of your correspondents with specimens—of the former species more particularly, until my stock shall have become exhausted.—*Wm. Hanson; Reigate, November* 7, 1842.

232. *Cibotium Baromez*, (Phytol. 63). I must tell you that I again have a fine frond of Cibotium Baromez, seven feet long, sparingly in fruit. This is the third time the plant has fruited with us, which is rather singular, as there has been no particular care bestowed upon it; and why should it persist in flowering here and not elsewhere?—*David Cameron; Botanic Garden, Birmingham, November* 8, 1842.

233. *Note on Hypericum perforatum, β. angustifolium*, Koch; *H. veronense*, Schrank. As this plant has not been noticed by any British writer, perhaps it will be interesting to some of your readers to know that it has been found this season. On the 6th of July last, in company with my friend Mr. Tatham, I made a short excursion in the immediate neighbourhood of Settle, for the purpose of making myself acquainted with a few of the Carices of that part. At Giggleswick Scar I met with the above Hypericum; the plant was plentiful, but as it was only just coming into flower at that time, I did not gather much of it. As Mr. Tatham is on the spot I may perhaps, through his kindness, be able to procure specimens next season. — *Samuel Gibson; Hebden Bridge, November* 8, 1842.

[The receipt of Mr Gibson's communication reminded us of a specimen of a narrow-leaved Hypericum, received in 1839 from Mr. Cameron, of the Birmingham Botanic Garden. It is labelled "Hypericum perforatum, var. microphyllum? Ludlow: 1839." Not being able to find the letter which accompanied the specimen, we wrote to Birmingham respecting it, and have been favoured with the following reply from Mr. Westcott. Our specimen is much more branched than Hypericum perforatum generally is, the branches being nearly erect; the leaves are very narrow, and their edges revolute.—*Ed.*]

234. *Note on the narrow-leaved Hypericum from Ludlow.* The Hypericum was first observed by Mr. Cameron and myself, in the year 1839, on the walls of Ludlow Castle, and since that time on many of the walls which surround the Castle. I have also this year found it on the rocks of Whitcliffe, and on the hedge-banks near the Angel-bank, Clee hills. In the year 1839, Mr. Cameron and myself brought roots of it from the walls of the Castle, and on our return they were planted in the Birmingham Botanic Garden, where the plant has continued to flourish, still retaining its character. I have some recollection that we sent you a specimen on our return, under the name of Hypericum perforatum, var. microphyllum; but on further observation I conceive it to be distinct from that plant in its inflorescence, and as I cannot find that such a variety is described in any author to which I have access, I have called it H. perforatum, var. linearifolium. The plant is from one foot to a foot and a half high, less branched, and in all its parts much smaller than Hypericum perforatum; branches more erect and compact, not diffuse; inflorescence more corymbose than paniculate. —*Fred. Westcott; Violet Place, Spring Street, Edgbaston, November* 21, 1842.

235. *Lapsana pusilla*, Willd. I had the pleasure to meet with this singular and interesting little plant, in considerable abundance, during the late season (1842), in the sandy meadows west of the "Broom fields," on Bexley Heath. I believe it is scarce in some districts; it is not mentioned in either the Faversham, the Yorkshire, the Manchester, or any other local Flora to which I have referred, nor do I remember

to have observed it in any station so near the metropolis as the one just given.—*Edward Edwards*; *Bexley Heath, Kent, November* 12, 1842.

236. *Cyperus fuscus*, L. It may be interesting to the readers of 'The Phytologist' to be informed that this exceedingly scarce species still exists in its only recorded British locality, where it was first noticed by the late Mr. Haworth, namely, Eel-brook meadow, a marshy pasture situate between Walham Green and Parson's Green, beyond Little Chelsea, Middlesex. On a visit to the spot in September, 1841, I was so fortunate as to obtain several good specimens, although it required some patience and diligence in order to detect them, the entire plant being of inconspicuous appearance, and only a few inches in height.—*Id.*

237. *Note on Pyrola uniflora*, L. I am not aware if any of our hand-books mention that this species seems to possess a similar property with that appertaining to our three Droseras, as observed by Sir W. J. Hooker and Mr. Wilson, (Brit. Flora, 132, 4th ed.) At least, judging from specimens in my own possession, labelled as having been collected in the woods at Scone, Perthshire, by Mr. W. Gardiner, jun. of Dundee, the single-flowered winter-green, like the British species of Drosera, retains the property of staining the paper that lies next to it in the herbarium, of a deep rusty *rose* colour, so that the form of the plant is distinctly represented through to the back of the sheet on which it is fastened, and also upon the backs of several others which, at different times, may have lain above it, and this although the specimens are perfectly dry.—*Id.*

[We can confirm our correspondent's observations on this plant; other species of Pyrola appear to possess the same property.—*Ed.*]

238. *Habitats for Petroselinum segetum*, Koch, *and Carex Pseudo-Cyperus*, L. For the use of the youthful botanists resident in or near the "great metropolis," to whom information of the whereabouts of any of the rarer species is a desideratum, I would mention that of Petroselinum segetum. Of this plant I gathered specimens a summer or two ago from Charlton lane, and about the church-yard wall, Charlton, Kent, which, if I mistake not, is an unpublished station for this pretty species. And of the beautiful Carex Pseudo-Cyperus, in June, 1842, I noticed several large tufts growing by the margins of some shallow pools, near where excavations for brick-earth were in operation, at the Highgate end of Maiden lane, Holloway, Middlesex, a short distance from the Highgate cemetery.—*Id.*

[Petroselinum segetum is not uncommon in some of the marshy ground near London, as between the Thames and the lower road to Deptford, where it sometimes grows to a considerable size.—*Ed.*]

239. *Enquiry respecting Byssus barbata*, Eng. Bot. I enclose you a specimen of a byssoid substance, or fungus, gathered by myself last week from a mass of decaying timber supporting the roof of a drift-way in an iron-mine at Clurewell Meend, Forest of Dean, Gloucestershire, 318 feet below the surface of the ground. When I first saw it in the mine by candle-light, it presented a very beautiful appearance, looking like a golden fleece with every hair glistening with moisture. It extended over a considerable surface of the roof of the drift-way, and on its sides, as far as the decaying timber extended. It no doubt belongs to the old genus Byssus of authors, which, having been abolished for sheltering too many outcasts of other genera, our present species has been turned out of doors, and from the glorious uncertainty of modern botanical nomenclature, especially in the fungoid tribes, I do not know where to find it. It certainly appears to me to bear a close resemblance to, if indeed it be not absolutely

identical with, the Byssus barbata of 'English Botany,' as drawn by Sowerby; and at p. 181 of Hooker's 'English Flora,' v. pt. ii. Fungi, it is incidentally stated that this Byssus barbata of 'English Botany' is *Ozonium auricomum*. No authority however is given for this name, and on turning to the index for *Ozonium*, no such name occurs. Under these circumstances, being dubious as to whether the Byssus barbata of Smith and Sowerby is described at all in the cryptogamic volumes of Hooker's 'British Flora,' perhaps some fungological reader of 'The Phytologist' may be able to give some information on the subject, or refer me to a recent volume where the plant is noticed under its present recognised name. I recollect no very late notice of the occurrence of this production in local Floras.—*Edwin Lees; Church-Hill Cottage, Powick, Worcestershire, November* 16, 1842.

240. *Bryum pyriforme*. Under this species the authors of 'Muscologia Britannica' observe—"They (the leaves) are formed, moreover, almost wholly of nerve; there being only a narrow membranous margin, which, *towards the extremity*, is deeply serrated;" (Ed. 1, p. 118). I pointed out to Dr. Taylor, a few months ago, the discrepancy between this and the corresponding remarks in 'English Flora' (quoted by Mr. Gibson), and we agreed that, if not an error of the press, it was to be referred to an inadvertence on the part of the author of the latter work. As to the actual facts, I have assuredly never seen the leaves of Bryum pyriforme serrated "at the base:" my Yorkshire specimens show faint serratures near the points of the leaves, but in a specimen now before me, gathered at Blarney, near Cork, since the publication of 'Flora Hibernica,' they are far more distinct. The figure in 'Musc. Brit.' does certainly not represent the leaf "deeply serrated," and yet I cannot doubt that the authors of that work *saw* what they described. Mr. Gibson need not be told (for no one knows better than he) that mosses, as well as other plants, are liable to variation in this respect.—*Richard Spruce; York, November* 16, 1842.

241. *Note on the discovery of Statice tatarica, near Portsmouth.* I beg to communicate to your esteemed periodical the discovery of Statice tatarica as a British plant. It has been observed by myself, as well as by Mrs. Robinson of this town, on the shore between Wicker Hard and Cams, on the borders of Portsmouth Harbour: I have also noticed it growing by the side of Fareham Creek, from half a mile to a mile below the town. I was at first undecided to what species to refer it; but on forwarding a specimen to Professor Lindley, he pronounced it to be S. tatarica. Its time of flowering is about the same as that of S. Limonium; and it is undoubtedly wild in both places. —*Wm. L. Notcutt; Fareham, November* 21, 1842.

ART. CVI. — *Proceedings of Societies.*

BOTANICAL SOCIETY OF EDINBURGH.

This Society held its first meeting for the season on Thursday the 10th instant,—Professor Graham in the chair. James Edward Winterbottom, Esq. M.A., F.L.S. &c. East Woodhay, Newbury, Berks, and Jas. Carter, Esq., M.R.C.S., Petty Cury, Cambridge, were elected non-resident Fellows; and Mr. John Thompson, Crowhall Mill, Ridley, Northumberland, an Associate of the Society. A donation to the library was announced from Thomas Brown, Esq. (per David Stuart, Esq.), and numerous parcels of plants &c. were stated to have been received since last meeting.

Mr. Brand read a paper by Mr. Edmonston, jun., on the Botany of Shetland, and instituted a comparison between the number of genera and species existing in that region, and those which occur in other districts of Scotland.

"The Botany of Shetland," observes Mr. Edmonston, "though not very extensive, is interesting. Many of the less common (chiefly subalpine) plants are abundant in all situations, and many species very commonly distributed, and indeed often marked as *universal* throughout Great Britain, are very rare or altogether unknown in Shetland. Among the last may be mentioned — *Alchemilla arvensis* and *vulgaris*, *Briza media. Primula veris*, *Anagallis arvensis*, *Convolvulus arvensis*, *Teucrium Scorodonia*, *Geranium robertianum*, *Lapsana communis* and others of the commonest weeds. Again, *Thalictrum alpinum*, *Blysmus rufus*, and other *local* plants, are everywhere abundant, growing down to the sea level; and sylvan plants — those generally associated with woods or luxuriant pasturage, are almost entirely wanting. The Geology of Shetland is rich in interesting phenomena. The formation is almost wholly primitive—the most abundant rocks being gneiss, mica-schist, clay and chlorite slate, granite, quartz, serpentine, limestone, &c.; besides which there are amygdaloidal porphyritic rocks of different kinds. The difference of formation between Shetland and Orkney is very striking —that of the latter being as uninteresting as the former is the reverse. Orkney consists chiefly of an apparent continuation of the North coast of the Mainland, being composed of sandstone, clay-slate, and other secondary rocks, while the Shetlands may be said to belong to the oceanic series of islands. Again, the difference seems as great between the Shetland and Faroe isles—for in the latter group the rocks are all basaltic. Many of the Shetland rocks present a most remarkable degree of similarity to those of the South of England—chrome ore, native magnesia, serpentine, crystallised fluor, and several others, being common to both extremities of Great Britain, though rarely found in the intermediate space; and it is a singular fact, that some of the plants present a corresponding analogy—as for instance, *Lathyrus maritimus*, &c.

"The prevalence of peat is a very characteristic feature in the general aspect of Shetland, and proves beyond a doubt the great abundance of trees in former ages.— Judging from their remains, these seem chiefly to have belonged to Corylaceæ and Pinaceæ, as trunks and nuts of the hazel, and cones of *Abies Picea*, have repeatedly been dug out of the moors. This evidence of their existing formerly in such abundance, leads to the question whether they may still be grown. I certainly do not think that the experiment has been fairly tried, nor is it probable that it soon will be on a scale that can set the matter at rest. Indeed, many reasons seem to concur in rendering it unlikely that trees could be reared so as to render them profitable in an economical point of view. The frosts and cold weather which often occur early in autumn do not leave the plants time to form their buds for hybernation before the old leaves are nipped; and the heat of summer is by no means sufficient (as in most other northern latitudes) to compensate for the shortness of its duration. I do not attach so much importance as has sometimes been done to the influence of the sea-spray, by which, during heavy gales, Shetland is liable to be swept — for these happen generally after the sap has descended, and when therefore the plant is dormant.

I may here mention some experiments which have been carried on by my father for five or six years, in order, if possible, to settle the question. He obtained from Messrs. Lawson, of Edinburgh, all the more generally cultivated trees and shrubs,— North British, North American, and North Asiatic, — and the result has been as follows: — Among the indigenous trees of Scotland, the ash appears to stand as well as any other, as it puts forth its leaves late and loses them early. Of the scarcely indigenous, or naturalised species, the plane-tree appears to be the hardiest; while the birch and Scotch fir will scarcely live a year. Again, *Pinus montana* and *Æsculus Hippocastanum*, comparatively tender plants, appear to thrive well; and *Pyrus aucuparia*, which is indigenous with us, thrives tolerably in cultivation. Almost all the willows do well;—*Salix Russelliana*, *fragilis*, *cinerea*, *viminalis* and *vitellina*, among the best. The alder is rather too early in putting forth its leaves, but some poplars appear to do well, especially the white-Scotch, black Italian and Lombardy, and *Populus nigra* is indigenous. Oak and beech will not thrive at all. Generally speaking, evergreens, whether trees or shrubs, appear not to suit. *Pinus Cembra*, *Abies Picea*, black, white and Norway, have all been repeatedly tried, but seldom languished a year. Even the hardy shrubby evergreens, which are met with indigenous, or in every shrubbery on the mainland, as *Ilex Aquifolium*, *Rhododendron ponticum* and *flavum*, *Viburnum Tinus*, &c., die almost immediately. Among the best thriving evergreen shrubs may be mentioned *Arbutus Uva-ursi*, *Cotoneaster mucronata*, *Hedera Helix*, &c. The latter, indeed, is native, and in some situations thrives remarkably well, as it also does in Orkney.

"The climate of Orkney and Shetland are much alike, but scientific observations have only been recorded of the former. 'Regarding it,' Mr. Clouston states, 'the high latitude of Orkney will no doubt induce many well-informed persons even in Scotland to suppose that our winter is much colder than that of any other country, and it may surprise them when we say that our winter is as warm as that of Glasgow, and several degrees warmer than that of Applegarth in Dumfriesshire, on the very southern border. This is owing to the influence of the surrounding ocean, which elevates the temperature of winter as much as it lowers that of summer. Thus, the temperature of Orkney in May, June and July, is 7 degrees below that of Glasgow dnring these months; but for the *whole year*, the mean annual temperature in Orkney is nearly the same as that in Applegarth—both being about 46 degrees, or 3¾ below that of Glasgow.'"

Mr. Edmonston goes on to observe, that "the uniformity of temperature in Shetland strikes every one; and a remarkable feature in the climate is the great and almost constant humidity. These causes no doubt have a great influence on the vegetation, for there is not a semblance of arctic, and scarcely (except in a very few instances) of alpine vegetation throughout the whole islands. This is certainly rather what might be expected than otherwise; but there are other anomalies which cannot be altogether referred to climate; and the extreme scantiness of the Flora is remarkable, considering the extent of the islands, and the variety of soil, exposure and situation which they present."

The flowering plants (including the grasses) hitherto observed in Shetland, extend to 94 genera and 178 species; while those found in the district of Moray amount to 333 genera and 692 species; and even in a range of sixteen miles round Aberdeen, there have been found 287 genera and 562 species; and in a similar extent round Edinburgh, the numbers are 389 genera and 908 species — while the flowering plants of Great Britain extend to 523 genera and 1594 species. The proportion of species to genera is also least in Shetland and Aberdeenshire, being only 2 to 1, whereas in the Edinburgh district it is 2⅓ to 1; and in Britain generally it is 3 to 1.

The statements in Mr. Edmonston's paper led to some interesting conversation—in the course of which Professor Graham remarked, as a phenomenon which has not hitherto received a satisfactory solution — the entire destruction or absence of wood in many parts of Scotland where once it evidently abounded, and where the change cannot apparently have arisen through human instrumentality; and he observed that the investigation of this subject would be attended with great interest, besides being of importance in a national point of view.

Dr. Neill said, that in his opinion the peat mosses of Scotland have generally been formed at an earlier period than is usually supposed — some of them containing trees which do not now exist in the country; and he suggested that means should be taken to ascertain the particular species of which the mosses consist, by taking specimens of wood and seeds, or cones &c. from the successive layers, and duly noting their relative position, with all such circumstances as might tend to establish a correct theory respecting our aboriginal forest vegetation; indeed he had once proposed that a prize should be offered by the Highland Society for the best essay on this subject; but his proposal had not been carried into effect.

Mr. Brand remarked that in this country, as in America, the forests in many places appear to have been destroyed by fire; and he instanced some oak trees in Dalkeith Park, which seem to have been burnt down at an early period, and to have thrown out new trunks from the stumps at a later date.

Mr. Goodsir supposed that the increase of the peat might gradually render the soil unfit for the support of trees; and stated, in reference to a remark made by Professor Graham, on the approach of the alpine plants in Shetland to the sea-edge, that this peculiarity coincided with the elevation of the deep-sea invertebrate animals, to the high-water mark in the same locality.

BOTANICAL SOCIETY OF LONDON.

November 4, 1841. — Hewett Cottrell Watson, Esq., F.L.S., V.P., in the chair. Donations to the library were announced from the American Academy of Sciences, Philadelphia, the Horticultural Society of Berlin, and Mr. S. P. Woodward. British plants had been received from Mr. G. W. Francis, Mr. S. P. Woodward, Mr. D. Stock, Mr. B. D. Wardale, Mr. R. Ranking and Mr. S. Gibson. The Chairman presented a specimen of *Cnicus Forsteri*, which he said corresponded exactly with the cultivated specimen of the same species preserved in Smith's herbarium. The specimen exhibited by Mr. Watson was also a cultivated one; the root having been found near Whitemoor pond, in Surrey, in June, 1841, and flowering specimens of it exhibited before the Society last year.

The wild specimens had from two to four flowers only on each stem; whilst the cultivated specimens had ten or a dozen each. Mr. W. exhibited the specimens for the purpose of pointing out the differences between *Cnicus Forsteri* and *C. pratensis*; branched specimens of the latter species having been in several instances mistaken for the former.

Mr. Robert Ranking, F.L.S., presented a specimen of *Plantago Coronopus*, collected at Hastings, showing the easy and natural transition from a spike to a raceme; also a specimen of *Dactylis glomerata*, in which the glumes were become foliaceous.

The commencement of a paper was read from Mr. George Clarke, of the island of Mahé (communicated by Mr. H. W. Martin), "On *Lodoicea Sechellarum*," which will be concluded at the next meeting, when a copious report will be given.—*G.E.D.*